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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,656	04/21/2004	Martin G. Hartung	58493US003	4923
32692	7590	12/29/2006	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			BERHANU, SAMUEL	
			ART UNIT	PAPER NUMBER
			2838	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/29/2006	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/828,656	HARTUNG ET AL.
	Examiner	Art Unit
	Samuel Berhanu	2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 25 September 2006.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 32-50 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 32-50 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 21/3/20004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.
 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application
 6) Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 39 recites the limitation "charging contacts" in line 4. There is insufficient antecedent basis for this limitation in the claim. For examination purpose examiner assumed that "charging contacts", meant to refer charging pins. Appropriate correction is required
2. Claim 36 recites the limitation "sensing pins" in line 4. It is unclear how a pin senses a current; instead a sensor is sensing a current or a voltage. Appropriate correction is required.
3. Claim 46 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to the other claims in the alternatives only. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 32, 35-36 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Maeda et. al. (US 5,861,729).

Regarding Claim 32, Maeda et. al disclose in Figures 1 and 2, a battery powered handpiece, comprising, a sensing contact (28) for detecting a current flow between a

first charging contact (24), for connection to a first contact of a battery (8), and a second charging contact (26), for connection to a second contact of a battery (10).

Regarding Claim 35, Maeda et. al. disclose in Figures 1-3, a diode (14) located between said first charging contact (8) and said first contact of said battery for allowing charging current to flow from said first charging contact into said battery but preventing current flow in opposite direction.

Regarding Claim 36 Maeda et. al. disclose in Figures 1-3, a sensing pin (28) detecting current flow between a first charging pin (10) and a second charging pin (12) (noted that when element 2 is on hook condition then the current flows between two charging pins, 10 and 12, is sensed by the current detector).

Regarding Claim 39, Maeda et. al. disclose in Figures 1-3, wherein said sensing pin of said charger device (30) is in contact with a sensing pin at said headpiece if said headpiece is connected to the charger device so that said sensing pin at said charger device further detects current flow between said first and second charging contacts of said headpiece, said current flow having a potential for initiating an electrochemical reaction (noted that for examination purpose examiner assumed that "contacts" meant to refer pins).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et. al. (US 5,861,729) in view of Kawashima (US 2002/0074970).

Regarding Claim 33, Maeda et. al. do not disclose explicitly, a magnet co-operating with a magnetically activatable switch arranged in a charger device, for initiating a charging operation once the battery-powered handpiece is electrically connected to said charger device. However, Kawashima discloses in Figures 1A-6, a magnet co-operating with a magnetically activatable switch (14, 24) arranged in a charger device, for initiating a charging operation once the battery-powered handpiece is electrically connected to said charger device (see also paragraphs 0027-0029). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use a magnetic switch with Maeda et. al. charger, for the benefit of allowing the circuit to only operate when a device with a magnetic means is brought into close proximity.

Regarding Claim 34, Kawashima discloses in Figures 1A-6, wherein said magnet (24) is arranged in proximity to the housing of the handpiece.

8. Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et. al. (US 5,861,729) in view of Compoly et. al. (US 3,851,322).

Regarding Claim 37, Maeda does not disclose explicitly, a warning means for giving a warning signal if current flow between said first and second charging pins is sensed by said sensing pin. However, Compoly et. al. disclose in Figure 2, a warning means (14a) for giving a warning signal if current flow between said first and second

charging pins is sensed by said sensing pin (see Abstract, Column 1, lines 60-67). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use a short circuit monitoring means with a warning signal as taught by Compoly et. al. in Maeda et. al. device in order to monitor short circuit in the device.

Regarding Claim 38, Compoly et. al. disclose in Figures 1 and 2, comprising said warning means (202) provides and acoustic and/or optical warning.

9. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et. al. (US 5,861,729) in view of Inaba et. al. (US 5,945,809)

Regarding Claim 40, Maeda et. al. do not disclose explicitly, an electronic switch connected to said sensing pins of said charger device for disconnecting a charging voltage applied to said first and second charging pins if current flow is sensed by said sensing pin. However, Inaba et. al. disclose in Figures 1-6, Column 2, lines 65-67 and Column 3, lines 1-10, an electronic switch connected to said sensing pins of said charger device for disconnecting a charging voltage applied to said first and second charging pins if current flow is sensed by said sensing pin. It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a short – circuit protection means in Maeda et. al. circuit in order to prevent the battery from catching fire due to generation of heat.

10. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et. al. (US 5,861,729) in view of Inukai et. al. (US 5,867,798).

Regarding Claim 41, Maeda et. al. do not disclose explicitly, a detector for detecting the presence or absence of said battery powered handpiece and a switch for

switching on/off the charging voltage dependent on detection of the presence/absence of said handpiece. However, Inukai et. al. disclose in Figure 1, a detector (16) for detecting the presence or absence of said battery powered handpiece and a switch (Q1) for switching on/off the charging voltage dependent on detection of the presence/absence of said handpiece (noted when device 3 is placed on the charger, 12, the charge control unit detects electrical connection between the charger and the battery terminals and activate the transistor accordingly). It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a control means that activates a switch when the charger and the rechargeable device electrically meet as taught by Inukai et. al. in Maeda et. al. device in order to control the charging current.

11. Claims 42-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et. al. (US 5,861,729) in view of Inukai et. al. (US 5,867,798), and further in view of Watabe et. al. (US 5,793,186).

Regarding Claim 42, neither Maeda et. al. nor Inukai et. al. disclose wherein said switch is selected from the group comprising mechanical switches, optical switches, electromechanical switches, electro-optical switches or magnetic switches. However, Watabe et. al. disclose in Figures 1 and 2, switch is selected from the group comprising mechanical switches, optical switches, electromechanical switches, electro-optical switches or magnetic switches (see also column 1, lines 38-42). It would have been obvious to one having ordinary skill in the art at the time of this invention to use a magnetic switch as taught by Watabe with the charger of Maeda, for the benefit of

allowing the circuit to only operate when a device with a magnetic means is brought into close proximity.

Regarding Claim 43, Watabe et. al. discloses, the magnetic switch comprises a magnetically activatable switch being operable in response to a magnet arranged in said handpiece (See Column 1, lines 38-42).

Regarding Claim 44, Watabe et. al. disclose wherein said magnetically activatable switch comprises a Reed Switch (Column 1, lines 38-42)

Regarding Claim 45, Inukai et. al. disclose in Figures 1 and 2, switch allowing a charging voltage to be applied to said charging pins in the presence of said handpiece.

12. Claims 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et. al. (US 5,861,729) in view of Kennedy (US 5,233,283).

Regarding Claims 47 and 49, Maeda et. al. do not disclose explicitly, wherein said a handpiece is a dental tool. However, Kennedy discloses a dental cure light (Column 2, line 42- 45). It would have been obvious to one having ordinary skill in the art at the time of this invention to Maeda's charging circuit with the ability to distinguish between nickel-hydride and nickel-cadmium battery packs, to charge a battery of Kennedy's dental tool.

Regarding Claims 48 and 50, Kennedy discloses a dental cure light (Column 2, line 42- 45).

Response to Arguments

1. Applicant's arguments filed 9/25/2006 have been fully considered but they are not persuasive. Applicant argues that Maeda et. al. do not teach or suggest, a sensing

contact that detects current flow between the first charging contact and the second charging contact. This is incorrect. Maeda et al. disclose that the when the device is on hook condition then the current flows between two charging pins, 10 and 12, is sensed by the current detector. Applicant is also advised that a pin doesn't have a capability to sense a current.

Conclusion

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel Berhanu whose telephone number is 571-272-8430. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SB



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